

**UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF MICHIGAN
SOUTHERN DIVISION**

HENROB LIMITED,

Plaintiff/Counter-Defendant,

v.

Case No. 05-CV-73214-DT

BÖLLHOFF SYSTEMTECHNICK GMBH & CO.
and BÖLLHOFF RIVNUT, INC.,
BAYERISCHE MOTOREN WERKE AG, BMW NA,
ROLLS-ROYCE MOTOR CARS LTD.
and ROLLS-ROYCE NA,

Defendants/Counter-Plaintiffs.

**OPINION AND ORDER DENYING DEFENDANTS' MOTION FOR SUMMARY
JUDGMENT THAT HENROB IS NOT ENTITLED TO DOCTRINE OF EQUIVALENTS**

This litigation involves two patents, U.S. Patent No. 5,752,305 (the “305 Patent”) and U.S. Patent No. 5,779,127 (the “127 Patent”), which deal with the self-piercing riveting technology invented by Plaintiff/Counter-Defendant Henrob Limited (“Henrob”). Pending before the court is a “Motion for Summary Judgment that Henrob is not Entitled to Equivalents for the ‘305 Patent Under the Doctrine of Equivalents” filed by Defendants/Counter-Plaintiffs, Böllhoff Systemtechnik GmbH & Co., and Böllhoff Rivnut, Inc., (collectively “Böllhoff”) and Defendants Bayerische Motoren Werke AG, BMW NA, Rolls-Royce Motor Cars Ltd., and Rolls-Royce NA (collectively “BMW”). The motion has been fully briefed, and the court has concluded that no further hearing on the

motion is necessary.¹ See E.D. Mich. LR 7.1(e)(2). For the reasons set forth below, the court will deny the motion.

I. BACKGROUND

Henrob asserts that, literally and under the doctrine of equivalents, the riveting method (the “Riveting Method”) used by BMW and other Böllhoff customers with Böllhoff’s riveting machine (the “Böllhoff Riveter”) to manufacture products that are either made in or imported into the United States, infringe method claims 1-4, 8 and 16 of the ‘305 patent, and the Böllhoff Riveter infringes machine claims 9, 10, and 14. (Undisputed Fact # 1.)

On June 4, 2006, the court held a Markman hearing to help it construe certain claim language disputed by the parties. (Undisputed Fact # 2.) On October 25, 2006, the court issued a claim construction opinion construing the disputed language, including the Material Flow Limitation. (Undisputed Fact # 3.) In the Claim Construction Opinion, referring to the Material Flow Limitation, the court stated that “the crux of the parties dispute [of the phrase] centers on the meaning of the word ‘prevent.’” (Undisputed Fact # 4, citing 10/25/06 Opinion at 18.) With regard to the Material Flow Limitation, the court also stated,

Based on the representations of Henrob during the prosecution of the ‘305 Patent, and based on the ordinary meaning of the word ‘prevent,’ the court will add the modifier ‘significantly’ to its construction to convey not only a restriction of lateral flow but a substantial restriction. (10/25/06 Opinion at 19.)

¹The court conducted a hearing in this case on December 19, 2008. Although the instant motion was not scheduled for hearing on that date, the court allowed counsel an opportunity to comment on any pending motions at that time. (See 12/15/08 Order.)

Having rejected portions of both Henrob's and Böllhoff's proposed constructions, the court will instead construe the disputed phrase as follows: 'the clamping force being of such magnitude to significantly restrict the inward, lateral flow of sheet material that is subject to the clamping force.' The court finds that this construction is supported, not only by the ordinary meaning of the terms at issue, but also by the bulk of the intrinsic evidence. (10/25/06 Opinion at 20.)

The language found in Claim 1 is nearly identical to the language found in Claim 9 and, absent any compelling argument from the parties that the claims should be construed differently, the court will adopt the same construction here. See *Fonar*, 821 F.2d at 632. Thus, the court will construe the second portion of the "clamping means" function to mean "the clamping force being of such [a substantial] magnitude to significantly restrict the inward, lateral flow of sheet material that is subject to the clamping force from the time when the self-piercing rivet penetrates the upper surface of the first sheet of material until the self piercing rivet is disposed in its fully driven position in the second sheet of material." (10/25/06 Opinion at 29-30).

(Undisputed Fact # 5, citing 10/25/06 Opinion.)

The '305 Patent, entitled "Self-Piercing Riveting Method and Apparatus," was filed with the US Patent Office on March 1, 1996, and issued on May 19, 1998.

(Undisputed Fact # 6.) The '305 Patent relates to "a method of and apparatus for riveting of the kind in which a self-piercing rivet is inserted into sheet material without full penetration, such that the deformed end of the rivet remains encapsulated by an upset annulus of the sheet material." (Undisputed Fact # 7.) A self-pierce rivet is designed to pierce the sheet material without the need for drilling any hole in the material and does not fully penetrate the lower sheet of material, so that "the rivet remains embedded in the sheet material 5, 6 after the rivet has been set," thus forming a corrosion resistant joint. (Undisputed Fact # 8.)

The claimed riveting method and riveting machine utilize a clamping device that

clamps the sheets of material with a substantial clamping force, up to [approximately]² 1.5 tonnes, immediately before and during the riveting operation in the region around the rivet insertion location. (Undisputed Fact # 9.)

Claims 1 and 16 claim a method of riveting, and claim 9 claims a riveting machine, and claims 1, 9 and 16 are the only independent claims of the '305 patent.

(Undisputed Fact # 10.) Claim 1 of the '305 Patent claims:

1. A method of riveting in which first and second superimposed sheets of material are interconnected by driving a self-piercing rivet through the first sheet into non-piercing engagement with the second sheet comprising the steps of:

- a) locating a die defining a recess beneath the second sheet in alignment with a punch located above the first sheet;
- b) positioning a rivet having an end adapted to expand when driven into a sheet of material between the punch and the first sheet;
- c) clamping the sheets together before the rivet is driven into the first sheet with a clamping force applied immediately adjacent the rivet, the clamping force being sufficient to prevent sheet material from being drawn laterally inwards towards the rivet as the rivet is driven into the sheets, said clamping force being larger than a clamping force merely required to hold said sheets against each other in a generally non-moving relation; and
- d) advancing the punch to drive the rivet into the first and second sheets so that the sheets are interconnected.

(Undisputed Fact # 11.) Claim 16 of the '305 Patent claims:

16. A method of riveting in which first and second superimposed sheets of material are interconnected by driving a self-piercing rivet through the first sheet into non-piercing engagement with the second sheet comprising the steps of:

- a) locating a die defining a recess beneath the second sheet in

²Henrob's response indicates that this fact is disputed, and proposed an alternative fact. The only difference between the two facts, though, is Henrob's addition of the word "approximately" which is indeed found in the language of the '305 Patent. (The '305 patent, Defs.' Ex. 5, col. 2, Ins. 49-51). The court treats this fact as materially undisputed.

- alignment with a punch located above the first sheet;
- b) positioning a rivet having an end adapted to expand when driven into a sheet of material between the punch and the first sheet;
- c) clamping the sheets together before the rivet is driven into the first sheet with a clamping force applied immediately adjacent the rivet, the clamping force being sufficient to prevent sheet material from being drawn laterally inwards towards the rivet as the rivet is driven into the sheets; and
- d) advancing the punch to drive the rivet into the first and second sheets so that the sheets are interconnected.

(Undisputed Fact # 12.) Claim 9 of the '305 patent claims:

9. A riveting machine for interconnecting a first sheet of a material and a second sheet of a material by driving a self-piercing rivet through the first sheet into non-piercing engagement with the second sheet comprising:
- a) a punch;
 - b) means for feeding rivets successfully to the punch for insertion into the sheets;
 - c) a die aligned with the punch for deforming the rivet inserted thereby; and
 - d) clamping means for clamping the sheets during the riveting operation around a location wherein the rivet is inserted, the clamping force being sufficiently substantial to prevent the material of the first sheet from being drawn laterally inwards towards the rivet as the rivet is being driven into the sheets.

(Undisputed Fact # 13.)

The original method claim 1 and apparatus claim 8 filed by Henrob claimed in the original application that eventually became the '305 patent, claimed:

1. A method of riveting comprising inserting a self-piercing rivet into sheet material without full penetration such that the deformed end of the rivet remains encapsulated by an upset annulus of the sheet material characterized in that the sheet material is clamped with a substantial force during the riveting operation in the region around the rivet insertion location.
8. A riveting machine for inserting a self-piercing rivet into sheet material without full penetration such that the deformed end of the rivet remains encapsulated by an upset annulus of the sheet material, said machine

comprising a punch, means for feeding rivets successively to the punch for insertion into sheet material to be riveted, a die aligned with the punch for deforming the rivet inserted thereby, and clamping means for clamping the sheet material with a substantial force during the riveting operation in the region around the rivet insertion location.

(Undisputed Fact # 14.)

On September 27, 1996, the Patent Office rejected both claims 1 and 8, because, among other reasons:

Both Samara and Muller teach a method of riveting overlapping panels using a clamping means coaxially surrounding the riveting punch to firmly clamp the panels together under a constant clamping force to prevent excessive deformation thereof during riveting. It would seem inherent that the clamping force applied by each clamping means is less than 1.5 tons. Further, in both cases, the riveting apparatus includes separate actuation means for actuating the clamping means and the riveting punch.

It would have been obvious to one of ordinary skill in the art at the time of the invention to include the clamping means of Samara or Muller in the riveting apparatus of EPO 172171 to prevent excessive deformation of the panels during riveting.

(Undisputed Fact # 15, '305 Patent Prosecution History, Defs.' Ex. 6, at HEN00104, HEN00107-08).³ Henrob proffers, and the record supports, that other rejections include formality rejections under 35 U.S.C. § 112 and 37 C.F.R. § 1.75(c). (Pl.'s Fact # 15, '305 Patent Prosecution History, Defs.' Ex. 6, at HEN00105-07.)

Following the Patent Office's rejections, Henrob cancelled claims 1 and 8 on March 21, 1997, and added new claim 15, which claimed a self-pierce riveting method

³The parties present this fact slightly differently, but the substance of it, as a direct quotation, is not disputed.

of riveting, and claim 16, which claimed a self-pierce riveting machine. (Fact # 16.)⁴

New claims 15 and 16 claimed as follows:

15. A method of riveting in which first and second superimposed sheets of material are interconnected by driving a self-piercing rivet through the first sheet into nonpiercing engagement with the second sheet comprising the steps of:

- a) locating a die defining a recess beneath the second sheet in alignment with a punch located above the first sheet;
- b) positioning a rivet having an end adapted to expand when driven into a sheet of material between the punch and the first sheet;
- c) clamping the sheets together before the rivet is driven into the first sheet with a clamping force applied immediately adjacent the rivet, the clamping force being sufficiently substantial to prevent sheet material from being drawn laterally inwards towards the rivet as the rivet is driven into the sheets; and
- d) advancing the punch to drive the rivet into the first and second sheets so that the sheets are interconnected.

9. A riveting machine for interconnecting a first sheet of a material and a second sheet of a material by driving a self-piercing rivet through the first sheet into non-piercing engagement with the second sheet comprising:

- a) a punch;
- b) means for feeding rivets successfully to the punch for insertion into the sheets;
- c) a die aligned with the punch for deforming the rivet inserted thereby; and
- d) clamping means for clamping the sheets during the riveting operation around a location wherein the rivet is inserted, the clamping force being sufficiently substantial to prevent the material of the first sheet from being drawn laterally inwards towards the rivet as the rivet is being driven into the sheets.

(Undisputed Fact # 17.)

In the Remarks section of its March 21, 1997 Amendment, Henrob stated:

Claims 1 and 8 have been rewritten as claims 15 and 16, respectively, to specify the clamping force requirement in terms of the effect of the force. More specifically, claims 15 and 16 claim that the clamping force must be

⁴The parties present this fact slightly differently, and the court has expressed it in its most neutral form.

sufficient to prevent sheet material from being drawn laterally inwards towards the rivet as the rivet is driven into the sheets. This is in contrast to merely clamping to ensure that the two sheets of material are in contact.

...

... There is no suggestion [in the prior art] that the clamping force applied should be sufficient enough to prevent sheet material from being drawn laterally inwards towards the rivet, as is claimed by the present invention.

...

... As a result, Muller does not teach or suggest clamping two sheets together with a force sufficient enough to prevent sheet material from being drawn laterally inwards towards a rivet during a riveting operation, as is claimed by the present invention.

(Undisputed Fact # 18, '305 Patent Prosecution History, Defs.' Ex. 6, at

HEN000405-07.)⁵

After Henrob cancelled claims 1 and 8 on March 21, 1997, and added new claims 15 and 16, and presented its arguments to the Patent Office, the Patent Office withdrew its rejection of the claims, renumbered method claim 15 as claim 1, and machine claim 16 as claim 9, and allowed the application to issue as the original '305 patent on May 19, 1998. (Undisputed Fact # 19, the '305 Patent, Defs.' Ex. 5 at 1; '305 Patent Prosecution History, Defs.' Ex. 6, at HEN000409-11).⁶

On May 30, 2003, the Patent Office ordered a reexamination of the claims that issued in the '305 patent, based on prior art that had not been considered by the Patent Office during the original prosecution of the '305 patent. (Undisputed Fact # 20.)

⁵The parties present this fact slightly differently, but the substance of it, as a direct quotation, is not disputed. Further, despite Henrob's objection that it did not "directly" refer to the prior art where indicated, the bracketed portion faithfully elucidates the implicit meaning of the quotation, and the court has therefore accepted Defendants' proposed fact as materially undisputed.

⁶The parties present this fact slightly differently, and the court has expressed it in its most neutral form.

In the first office action dated December 19, 2003, the Patent Office rejected method claim 1 and machine claim 9 as being unpatentable over the Aluminum Industries Article (“AI Article”). (Undisputed Fact # 21.) The AI Article is prior art and discloses a self-pierce riveter and self-pierce riveting method. (Undisputed Fact # 22.)⁷

In response to the December 19, 2003 office action, on February 19, 2004, Henrob filed Response A. (Undisputed Fact # 23.) In Response A, Henrob stated:

The distinction between the clamping sheets [sic] using a force applied by the nose as described above and clamping sheets to ensure that there can be no inward flow of material during the riveting operation is established in claim 1 by reference to a clamping force “being sufficiently substantial to prevent sheet material from being drawn laterally inwards towards the rivet as the rivet is driven into the sheets.” Claim 9 similarly recites “being sufficiently substantial to prevent the material of the first sheet from being drawn laterally inwards towards the rivet as the rivet is being driven into the sheets.”

. . .

There is certainly no reference to the effects achieved by the magnitude of clamping forces contemplated by the present invention i.e. preventing sheet material from being drawn laterally inwards.

(Undisputed Fact # 24.) With regard to machine claim 9, Henrob also argued that, in addition to the fact that the AI Article does not disclose the Material Flow Limitation as claimed in claim 9, the AI Article also does not disclose a hydraulically actuated clamping structure. (Undisputed Fact # 25).⁸

⁷This fact has been accepted as undisputed to the extent allowed by Henrob’s qualifications.

⁸This fact has been accepted as undisputed to the extent allowed by Henrob’s qualifications.

As part of Response A, Henrob submitted a declaration by Roger Staton Doo. Defendants contend that, in the affidavit, Mr. Doo represented to the Patent Office the differences between the prior art preclamping, self-pierce riveter and method disclosed in the AI Article, and the claimed riveter and method. (Defs.' Fact # 26, '305 Reexamination Prosecution History, Defs.' Ex. 7 at HEN000604-12, HEN000615.) Henrob disputes this characterization of the affidavit for several reasons. Instead, Henrob submits that:

Mr. Doo represented that he "was responsible for organizing tests to compare the results of riveting processes using our [Henrob's] pre-clamping invention with a spring clamping technique that was prevalent in the riveting of aluminum sheet material at the time the above cited reference [the AI Article] was published." (Defs. Appdx. Ex. 7 at HEN000610.) Mr. Doo also stated that he "believe[d] that the equipment described in the article used conventional spring clamping." (Id.) Henrob also disputes Defendants' suggestion that the riveter described therein is itself prior art because there is no evidence in the record that the Ariel riveter described was itself known or used in the United States before the invention by the applicant for patent, see 35 U.S.C. § 102(a), or otherwise qualifies as prior art under 35 U.S.C. § 102. Henrob disputes the use of the term "preclamping" in this proposed fact in connection with the alleged "self-pierce riveter and method disclosed in the AI Article" because "preclamping" is a term that Henrob coined to describe the invention of the '305 patent, which is not disclosed in the AI Article.

(Pl.'s Fact # 26, Defs. Ex. 7 at HEN000610.) In his Declaration, Mr. Doo stated: "The use of different rivet and die combinations for different material combination is well known and does not override the effect that the pre-clamping process will always produce a joint with insignificant lateral draw compared to that on the same joint made without the pre-clamping process." (Undisputed Fact # 27.)

In an Office Action dated May 11, 2004, the Patent Office confirmed the patentability of claims 9 to 15. (Undisputed Fact # 28.) The Examiner stated

Patentee's use of the claim language "clamping means for clamping sheets the sheets [sic] during the riveting operation . . . , in independent claim 9 invokes 112 ¶ 6 "means or step plus function" interpretation of the limitation. Thus the limitation is limited to the corresponding structure, materials or acts described in the specification and equivalents thereof. . . . Patentee's means relies on a hydraulic pre-clamping system.

(See Fact # 29, '305 Reexamination Prosecution History, Defs.' Ex. 7 at HEN000644.)⁹

In the May 11, 2004 Office Action, the Patent Office again rejected claim 1 over the AI Article, noting that, "it is inherent that the spring pre-clamping disclosed by the [AI Article] provide[s] some degree of force sufficiently substantial to prevent the sheet material from being drawn laterally inwards towards the rivet as the rivet is driven into the sheets." (Undisputed Fact # 29.)

On August 4, 2004, Henrob submitted Amendment B, where it proposed new claims 16 and 17, which claimed, in part, that the clamping force "prevents substantial distortion" and "substantially maintains the flatness" of the sheet material, respectively. (Undisputed Fact # 30)¹⁰ Amendment B also proposed amending claim 1 as follows:

clamping the sheets together before the rivet is driven in to the first sheet with a clamping force applied immediately adjacent the rivet, the clamping force being [sufficiently substantial] sufficient to prevent sheet material from being drawn laterally inwards towards the rivet as the rivet is driven into the sheets, said clamping force merely required to hold said sheets against each in other in a generally non-moving relation.

(Undisputed Fact # 30 (additions underlined, deletions in brackets).)

⁹The parties present this fact slightly differently, but the substance of it, as a direct quotation, is not disputed.

¹⁰This fact has been accepted to the extent allowed by Henrob's qualifications. Also, Henrob notes that Amendment B did not technically add any claims to the '305 Patent because the examiner did not enter Amendment B. (Pl.'s Fact # 30.)

Also in Amendment B, Henrob argued to the Patent Office, “The reason for increasing the clamping force above that needed to hold the sheets in place is to prevent drawing sheet material laterally inwards as explained in Response A.” (Undisputed Fact # 31.)

Defendants contend that, on August 30, 2004, the Patent Office issued another office action, noting that amended method claim 1 would be definable over the prior art, but rejected newly added claims 16 and 17 because they were not supported by the specification. (Defs.’ Fact # 32.) Henrob disputes this fact, stating that claim 1 was not amended and claims 16 and 17 were not “newly added.” (Pl.’s Fact # 32.) Henrob also correctly points out that the Examiner stated that the invention supports the claim limitation in proposed claim 16, but not the claim limitation in proposed claim 17. (*Id.*, ‘305 Reexamination Prosecution History, Defs.’ Ex. 7 at HEN000678.) The parties agree that the Examiner stated, “As discussed in the Declaration of Roger Staton Doo dated February 23, 2004, the clamping of the prior art device apparently only prevents the sheets from slipping. By providing an [sic] greater clamping force than the prior art, the instant invention is capable of preventing lateral distortion of the sheet material from being drawn laterally inwards towards the rivet as the rivet is driven into the sheets.” (Undisputed Fact # 32.)

On September 10, 2004, Henrob filed Amendment C, which Defendants assert cancelled previously added new claims 16 and 17, and added new method claim 16, which is virtually identical to method claim 1, except method claim 16 does not include the limitation “said clamping force merely required to hold said sheets against each in other in a generally non-moving relation.” (Defs. Fact # 33.) Henrob does not materially

dispute this fact, except to assert that Amendment C did not technically “cancel” any claims because the Examiner did not enter Amendment B. (Pl.’s Fact # 33.)

In Amendment C, Henrob stated to the Patent Office, “The reason for increasing the clamping force above that needed to hold the sheets in place is to prevent drawing sheet material laterally inwards as explained in Response A.” (Undisputed Fact # 34.)

After Henrob amended claim 1 and presented arguments to the Patent Office regarding the patentability of the claims, the Patent Office decided that the claims were allowable. (Undisputed Fact # 35.)¹¹

In the Reasons for Patentability/Confirmation, the Patent Office stated:

As discussed in the Declaration of Roger Stanton Doo dated February 23, 2004, the clamping force of the prior art device apparently only prevents the sheets from slipping with respect to each other. By providing a greater clamping force than the prior art, the instant invention is capable of providing a clamping force sufficient to prevent sheet material from being drawn laterally inwards towards the rivet as the rivet is driven into the sheet. There is no teaching or suggestions in the prior art of record to provide a clamping force sufficient to prevent sheet material from being drawn laterally inwards towards the rivet as the rivet is driven into the sheet.

(Undisputed Fact # 36.)

II. STANDARD

¹¹This fact has been accepted as undisputed to the extent allowed by Henrob’s qualifications. Defendants submit that the Patent Office allowed the claims only after Henrob amended claim 1 and presented arguments regarding the Material Flow Phrase in the claims. Henrob, on the other hand, states that the Patent Office allowed the claims after Henrob defined the magnitude of the clamping force more clearly and explained that the scope of the claims did not change through the amended claim language. Henrob disputes that these arguments were regarding the patentability of the Material Flow limitation.

Under Federal Rule of Civil Procedure 56, summary judgment is proper when there is no genuine issue as to any material fact and the moving party is entitled to judgment as a matter of law. Fed. R. Civ. P. 56(c). “In deciding a motion for summary judgment, the court must view the evidence in the light most favorable to the non-moving party, drawing all reasonable inferences in that party’s favor.” *Sagan v. United States*, 342 F.3d 493, 497 (6th Cir. 2003). “Where the moving party has carried its burden of showing that the pleadings, depositions, answers to interrogatories, admissions and affidavits in the record, construed favorably to the non-moving party, do not raise a genuine issue of material fact for trial, entry of summary judgment is appropriate.” *Gutierrez v. Lynch*, 826 F.2d 1534, 1536 (6th Cir. 1987) (citing *Celotex Corp. v. Catrett*, 477 U.S. 317 (1986)).

The court does not weigh the evidence to determine the truth of the matter, but rather, to determine if the evidence produced creates a genuine issue for trial. *Sagan*, 342 F.3d at 497 (quoting *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 249 (1986)). The moving party must first show the absence of a genuine issue of material fact. *Plant v. Morton Int’l, Inc.*, 212 F.3d 929, 934 (6th Cir. 2000) (citing *Celotex*, 477 U.S. at 323). The burden then shifts to the nonmoving party, who “must do more than simply show that there is some metaphysical doubt as to the material facts.” *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586 (1986). They must put forth enough evidence to show that there exists a genuine issue to be decided at trial. *Plant*, 212 F.3d at 934 (citing *Anderson*, 477 U.S. at 256).

The existence of a factual dispute alone does not, however, defeat a properly supported motion for summary judgment – the disputed factual issue must be material.

See *Anderson*, 477 U.S. at 252 (citation omitted) (“The judge’s inquiry, therefore, unavoidably asks whether reasonable jurors could find by a preponderance of the evidence that the plaintiff is entitled to a verdict – ‘whether there is [evidence] upon which a jury can properly proceed to find a verdict for the party producing it, upon whom the *onus* of proof is imposed.’”). A fact is “material” for purposes of summary judgment when proof of that fact would establish or refute an essential element of the claim or a defense advanced by either party. *Kendall v. Hoover Co.*, 751 F.2d 171, 174 (6th Cir. 1984) (citation omitted).

III. DISCUSSION

The patent holder has the burden of proof to establish infringement. See, e.g., *Linear Technology Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1325-26 (Fed. Cir. 2004) (“Because [the patent holder] bears the burden of establishing infringement at trial, in moving for summary judgment [the defendant] need only establish a deficiency concerning an element of [the patent holder’s] infringement claim.”); *Rohm & Haas Co. v. Brotech Corp.*, 127 F.3d 1089, 1092 (Fed. Cir. 1997).

“Analysis of infringement involves two steps.” *Searfoss v. Pioneer Consol. Corp.*, 374 F.3d 1142, 1148 (Fed. Cir. 2004). First, the district court construes the claims of the patent, determining their scope and meaning. *Id.*; *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372-74. Second, the claims, as construed by the court in step one, are compared limitation by limitation to the features of the allegedly infringing device. *Johnson v. Worldwide Assocs., Inc. v. Zebco Corp.*, 175 F.3d 985, 988 (Fed. Cir. 1999). The court has accomplished step one in its October 25, 2006 claim construction order (“*Markman* Order”).

Literal infringement occurs only if each limitation of the claim is present in the accused device. *Telemac Cellular Corp. v. Topp Telecom, Inc.*, 247 F.3d 1316, 1330 (Fed. Cir. 2001); *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1389 (Fed. Cir. 1992). Any deviation from the claim precludes a finding that the accused device infringes. *Telemac*, 247 F.3d at 1330 (citing *Cole v. Kimberly-Clark Corp.*, 102 F.3d 524, 532 (Fed. Cir. 1996)).

In addition, “[e]ven where an accused device falls outside the literal bounds of a claim, it may still infringe under the doctrine of equivalents if every claim element is literally or equivalently present in the accused device.” *Sage Prods., Inc. v. Devon Indus., Inc.*, 126 F.3d 1420, 1429 (Fed. Cir. 1997). The doctrine of equivalents allows the patentee to claim those insubstantial alterations that were not captured in drafting the original patent claim but which could be created through trivial changes. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002). Under the doctrine of equivalents, “[a]n element in the accused product is equivalent to a claim limitation if the differences between the two are ‘insubstantial’ to one of ordinary skill in the art.” *Eagle Comtromics, Inc. v. Arrow Communication Laboratories, Inc.*, 305 F.3d 1303, 1315 (Fed Cir. 2002). This doctrine “prevents an accused infringer from avoiding [liability] by changing only minor or insubstantial details of a claimed invention while retaining their essential functionality.” *Sage Prods.*, 126 F.3d at 1424. Infringement under the doctrine of equivalents “requires that the accused product contain each limitation of the claim or its equivalent.” *Eagle Comtromics*, 305 F.3d at 1315 (citing *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 40 (1997)).

In evaluating Defendants’ motion, the court keeps in mind that “[t]he doctrine of

equivalents cannot be used to erase ‘meaningful structural and functional limitations of the claim on which the public is entitled to rely in avoiding infringement.’” *Conopco Inc. v. May Dep’t Stores Co.*, 46 F.3d 1556, 1562 (Fed. Cir. 1994) (citation omitted). When applied too broadly, the doctrine of equivalents conflicts with the definitional and public-notice functions of the statutory claiming requirement. *Warner-Jenkinson*, 520 U.S. at 29. The Supreme Court has explained:

Each element contained in a claim is deemed material to defining the scope of the patented invention, and thus the doctrine of equivalents must be applied to individual elements of the claim, not to the invention as a whole. It is important to ensure that the application of the doctrine, even as to an individual element, is not allowed such broad play as to effectively eliminate that element in its entirety.

Id.; see also *Cooper Cameron Corp. v. Kvaerner Oilfield Prods., Inc.*, 291 F.3d 1317, 1321 (Fed. Cir. 2002).

The Federal Circuit applies two articulations of the test for equivalence.:

Under the insubstantial differences test, “[a]n element in the accused device is equivalent to a claim limitation if the only differences between the two are insubstantial.” *Honeywell Int’l Inc. v. Hamilton Sundstrand Corp.*, 370 F.3d 1131, 1139 (Fed. Cir. 2004). Alternatively, under the function-way-result test, an element in the accused device is equivalent to a claim limitation if it “performs substantially the same function in substantially the same way to obtain substantially the same result.” *Schoell v. Regal Marine Indus., Inc.*, 247 F.3d 1202, 1209-10 (Fed. Cir. 2001).

Voda v. Cordis Corp., 536 F.3d 1311, 1326 (Fed. Cir. 2008). In *Voda*, the Federal Circuit explained:

Under the doctrine of equivalents, “a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is ‘equivalence’ between the elements of the accused product or process and the claimed elements of the patented invention.” *Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21, 117 S.Ct. 1040, 137 L.Ed.2d 146 (1997) (citing *Graver Tank*

& Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 609, 70 S.Ct. 854, 94 L.Ed. 1097 (1950)); see also *Dawn Equip. Co. v. Ky. Farms, Inc.*, 140 F.3d 1009, 1015 (Fed.Cir. 1998) (explaining that to prove infringement under the doctrine of equivalents, “the accused device must be shown to include an equivalent for each literally absent claim limitation”). However, the use of the doctrine of equivalents to establish infringement is limited by the doctrine of prosecution history estoppel. *Warner-Jenkinson*, 520 U.S. at 30, 117 S.Ct. 1040. In particular, “prosecution history estoppel limits the broad application of the doctrine of equivalents by barring an equivalents argument for subject matter relinquished when a patent claim is narrowed during prosecution.” *Conoco*, 460 F.3d at 1363 (citations omitted).

Id. at 1324 -1325. “[P]rosecution history estoppel can occur during prosecution in one of two ways, either (1) [when the applicant makes] a narrowing amendment to the claim (‘amendment-based estoppel’) or (2) [when the applicant surrenders] claim scope through argument to the patent examiner (‘argument-based estoppel’).” *Id.* at 1325 (quoting *Conoco*, 460 F.3d at 1363)).

Defendants argue in their motion that Henrob is not entitled to prove infringement through the doctrine of equivalents with respect to the Material Flow Limitation. This limitation, as defined by Defendants, is present in claims 1, 9, and 16 of the ‘305 Patent. In claims 1 and 16, the Material Flow Limitation requires that “the clamping force being sufficient to prevent sheet material from being drawn laterally inwards towards the rivet.” (Undisputed Facts ## 11, 12.) The Material Flow Limitation is expressed slightly differently in claim 9, which states “ the clamping force being sufficiently substantial to prevent the material of the first sheet from being drawn laterally inwards towards the rivet.” (Undisputed Fact # 13.) Defendants assert that, based on the original prosecution history as well as the reexamination prosecution history, statements made by Henrob to distinguish the Material Flow Limitation from the prior art preclude Henrob from utilizing the doctrine of equivalents to prove infringement. Specifically, Defendants

claim that the doctrines of prosecution history estoppel and claim vitiation entirely preclude any use of the doctrine of equivalents with respect to the Material Flow Limitation.

The application of both of these limitations are issues for the court. As the Federal Circuit has explained:

Notwithstanding the jury's proper fact-finding role in assessing the equivalence of each limitation of a claim, the Supreme Court has recognized "various legal limitations on the application of the doctrine of equivalents." *Warner-Jenkinson Co., Inc. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 39 n. 8, 117 S.Ct. 1040, 137 L.Ed.2d 146 (1997). These "legal limitations . . . are to be determined by the court either on a pretrial motion for partial summary judgment or on a motion for judgment as a matter of law at the close of the evidence and after the jury verdict." *Id.* (emphasis added). In *Warner-Jenkinson*, the Supreme Court identified two such "legal limitations": (1) the "all-elements rule," which bars a patentee from asserting "a theory of equivalence [that] would entirely vitiate a particular claim element," and (2) prosecution history estoppel, which bars a patentee from asserting a scope of equivalency surrendered during prosecution. *Id.* On the issue of prosecution history estoppel, our second en banc *Festo* decision held that "the determinations concerning whether the presumption of surrender has arisen and whether it has been rebutted are questions of law for the court, not a jury, to decide." *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 344 F.3d 1359, 1368 (Fed. Cir. 2003) (en banc).

DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc., 567 F.3d 1314, 1323 (Fed. Cir. 2009) (emphasis omitted).

Citing various statements made during the prosecution history, and outlined above in the Background section, Defendants argue that

Henrob was unequivocal when it made clear to the Patent Office that it was the claimed Material Flow Limitation, which was added to the claims by Henrob, that was critical to the patentability and operation of its claimed invention. In other words, when Henrob amended the claims and argued to the Patent Office that it was the Material Flow Limitation that distinguished the claimed invention from the prior art, Henrob surrendered

all subject matter that did not fall with the literal scope of the Material Flow Limitation.

(Defs.' Mot. at 15.) Defendants argue that Henrob is impermissibly attempting to recapture now, through the use of the doctrine of equivalents, subject matter it surrendered in the prosecution of the '305 Patent. (*Id.* at 15-16.)

Similarly, Defendants argue that the claim vitiation doctrine also precludes Henrob from asserting equivalents for the material flow limitation. Defendants assert that allowing Henrob to utilize the doctrine of equivalents to show infringement of the Material Flow Limitation would violate the "all-elements rule of *Warner-Jenkinson*, because it would entirely vitiate the Material Flow Limitation." (*Id.* at 16 (citation omitted).)

In response, Henrob argues that neither the claim vitiation doctrine nor prosecution history estoppel apply in this case because any amendments and arguments Henrob made during prosecution of the original patent as well as during reexamination were made to clarify rather than narrow the scope of the '305 Patent. The court generally agrees with Henrob, as set forth in the court's order disposing of the cross-motions regarding intervening rights, that the statements made to the Patent Office, particularly during reexamination were statements of clarification. Nonetheless, the court also agrees with Defendants that the statements, whether made to clarify or to narrow, stressed the importance of the degree of force, *as specifically linked to the Material Flow Limitation*. (See Undisputed Facts ## 18, 24, 27, 31, 34.) Thus, the court generally agrees that any attempt to utilize the doctrine of equivalents to somehow

avoid the Material Flow Limitation would be prevented by prosecution history estoppel as well as the doctrine of claim vitiation.

This does not mean, however, that Defendants' motion should be granted. The inherent flaw in Defendants' motion is that they have not shown, or even articulated, how every conceivable equivalent necessarily falls within the doctrine of claim vitiation or prosecution history estoppel. Defendants' motion implies, or rather rests on, the fundamental premise that Henrob's statements preclude any use of the doctrine of equivalents. The court disagrees.

Defendants argue in the abstract, without identifying any example of the type of equivalent which may be precluded by Henrob's statements or amendments. Without further factual development, or at least an outline of the alleged equivalent at issue, the court is simply unprepared to evaluate whether Henrob is prevented from asserting any hypothetical equivalent. "[I]n every infringement analysis, the language of the claims, as well as the nature of the accused product, dictates whether an infringement has occurred." *Fantasy Sports Props., Inc. v. Sportsline.com, Inc.*, 287 F.3d 1108, 1118 (Fed. Cir. 2002). Here, the parties have proceeded through the briefing, arguing the legal import of prosecution history estoppel and claim vitiation, without actually comparing the nature of the accused product to the language of the '305 Patent. The only "example" of an asserted equivalent is found, in passing, in Henrob's response brief in which Henrob sets forth a possible example of an equivalent which would not be barred by prosecution history estoppel or claim vitiation. The example, however, is not presented in any sort of detail which could allow the court to evaluate the equivalent under the legal limitations of prosecution history estoppel or claim vitiation. Indeed, the

court is unpersuaded as to whether the example, which suggests that a “statistically significant restriction in inward, lateral flow” is not needed to show infringement (Pl.’s Resp. at 6), is even an asserted equivalent, as opposed to an argument which goes to literal infringement.

The court recognizes that it is Henrob’s burden to show infringement, whether literal or equivalent, as well as Henrob’s burden, if applicable, to rebut any presumption of surrender which may have arisen from Henrob’s statements during the prosecution of the ‘305 Patent. *Felix v. American Honda Motor Co., Inc.*, 562 F.3d 1167, 1181-82 (Fed. Cir. 2009). The court is in no way shifting Henrob’s burdens to Defendants. These issues, however, are presented to the court on Defendants’ motion for summary judgment. “A party seeking summary judgment always bears the initial responsibility of informing the district court of the basis for its motion, and identifying those portions of ‘the pleadings, depositions, answers to interrogatories, and admissions on file, together with the affidavits, if any,’ which it believes demonstrate the absence of a genuine issue of material fact.” *Taft Broad. Co. v. United States*, 929 F.2d 240, 247 (6th Cir. 1991) (quoting *Celotex Corp. v. Catrett*, 477 U.S. 317 (1986)); see also *Mt. Lebanon Pers. Care Home, Inc. v. Hoover Universal Inc.*, 276 F.3d 845, 848 (6th Cir. 2002); *Crown Operations Int’l Ltd. v. Solutia, Inc.*, 289 F.3d 1367, 1377 (Fed. Cir. 2002). Only once this initial burden is met by the moving party, does the burden shift to the nonmoving party to produce proper admissible evidence to defeat the motion. *Street v. J.C. Bradford & Co.*, 886 F.2d 1472, 1479 (6th Cir. 1989). If the non-moving party is unable to meet his or her burden of proof after sufficient time for discovery, summary judgement is proper. *Celotex Corp.*, 477 U.S. at 322-23. Of course, if put to the task,

the party bearing the burden of proof must present a jury question as to each element of its claim. *Davis v. McCourt*, 226 F.3d 506, 511 (6th Cir. 2000).

Here, Defendants have not met their initial burden of identifying the absence of evidence showing that *any* equivalent of the Material Flow Limitation is *necessarily* barred by the legal limitations of prosecution history estoppel or claim vitiation.¹² Thus, Henrob has no burden to come forward with any evidence in response to Defendants motion and Defendants motion fails under Rule 56. Simply put, Defendants have not sufficiently articulated the basis for their argument, nor have the facts been properly set forth to allow the court to rule on the application of prosecution history estoppel or the doctrine claim vitiation. Based on the record before the court, the court is unable--or unwilling--to rule definitively on these issues until further factual development at trial. Defendants may revisit this issue, not on a motion in limine, but in the form of a motion for judgment as a matter of law, at the close of the evidence and after the jury verdict, as specifically sanctioned by the Federal Circuit. *See DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1324 (Fed. Cir. 2009) (stating that the determination of the applicability of prosecution history estoppel is “to be [made] by the court, either on a pretrial motion for partial summary judgment or on a motion for

¹²Viewed in another light, even if Defendants had met their initial burden, Henrob has shown the existence of an issue of fact with respect to whether the sole “equivalent” at issue in these motions, the “statistical significance” element, is precluded by these limitations. The court is inclined to find that there is an issue of fact with respect to whether “statistical significance” is required even to show literal infringement. If Henrob intends to show infringement under the doctrine of equivalents with something less than “statistical significance,” the court finds that further factual development, at trial, is required before the court will rule on the application of the legal limitations to equivalence.

judgment as a matter of law at the close of the evidence and after the jury verdict.”)
(quoting *Warner-Jenkinson*, 520 U.S. at 39 n.8).

IV. CONCLUSION

For the reasons stated above, IT IS ORDERED that Defendants’ “Motion for Summary Judgment that Henrob is not Entitled to Equivalents for the ‘305 Patent Under the Doctrine of Equivalents” [Dkt. # 204] is DENIED.

S/Robert H. Cleland

ROBERT H. CLELAND

UNITED STATES DISTRICT JUDGE

Dated: September 29, 2009

I hereby certify that a copy of the foregoing document was mailed to counsel of record on this date, September 29, 2009, by electronic and/or ordinary mail.

S/Lisa Wagner

Case Manager and Deputy Clerk

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